

Chapter 1

Project Purpose and Background

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1.1 Introduction

1.1.1 Why a Decision is Needed

Glacier Northwest, a sand and gravel company with headquarters in Seattle, Washington, has submitted a grading permit application to King County. The application includes a proposal to significantly increase mining over current levels at its 235-acre Maury Island sand and gravel mine. The site is on Maury Island, adjacent to Vashon Island, in King County, Washington. King County issued a Determination of Significance (DS) for the proposal on August 11, 1998, based on its review of the project grading plan and environmental checklist dated May 1998 (this checklist is available for review at the Vashon Library). The DS documented the County's determination that significant environmental impacts could result from the proposal and an Environmental Impact Statement (EIS) is required. This EIS is being prepared to meet the requirements of the State Environmental Policy Act (SEPA), per Washington Administrative Code (WAC), Chapter 197-11 and King County Code (KCC) 20.44.

1.1.1.1 Decision to Be Made

The King County Department of Development and Environmental Services (DDES) must decide whether to deny, approve, or approve with conditions a grading permit for the mining operation, as proposed by Glacier Northwest and described in Chapter 2. In addition, a Shoreline Substantial Development Permit (SSDP) will also be required.

DDES's authority to make decisions regarding the proposed mining operation stems from King County Code, as well as its substantive authority under SEPA (WAC 197-11-660). DDES's mission is "to serve, educate and protect our community through the implementation of King County's development and environmental regulations." This Final Environmental Impact

Statement (FEIS) is one of the major tools DDES will use to achieve this mission for this project.

1.1.1.2 Scope of Decision and Relation to Other Projects

This EIS considers the specific impacts directly attributable to the Applicant's proposal to mine materials and barge them off the site. The EIS does not consider or evaluate site-specific impacts of off-loading and eventual use of materials. King County's decision to approve, deny, or approve with conditions the proposal does not pertain to off-loading, off-island trucking, or any other activity by the Applicant that occurs offsite.

King County has determined that the SeaTac expansion project and other potential markets for the material do not meet the criteria for evaluation in the same environmental document. The SeaTac proposal, or any other construction project, is not dependent on the Maury Island proposal. While these projects may eventually use product from the Maury Island site, they are not justified by the Maury Island proposal, and they are not dependent on it for their existence.

Likewise, the Maury Island proposal is not dependent on the SeaTac project, or on any other specific project, for its justification. While the Applicant has indicated a desire to secure that large potential contract, they have indicated that they wish to revise the permit on the mining site regardless of whether they would or would not receive that contract.

Consideration of other potential sites for mining is outside of the scope of the EIS. Per WAC 197-11-440, EIS Contents, *"when a proposal is for a private project on a specific site, the lead agency shall be required to evaluate only the 'no action' alternative plus other reasonable alternatives for achieving the proposal's objective on the same site."*

As stated in Section 1.2.1, King County DDES has no objectives for this project other than to (1) comply with SEPA, (2) adhere to its legal responsibilities to ensure a fair and reasoned decision regarding the Applicant's proposal, and (3) implement the DDES's mission *"to serve, educate and protect our community through the implementation of King County's development and environmental regulations."*

The DDES decision is not a broad one. For instance, DDES is not trying to determine how to acquire mineral resources. The

decision is narrow. It is restricted to evaluating the Applicant's proposal and to implementing King County regulations and policies to protect the community and the environment. The scope of this EIS reflects this scope of the decision.

1.1.2 The SEPA Process

1.1.2.1 SEPA History of the Project

On August 11, 1998, King County DDES determined that the Applicant's proposed mining plan required an EIS under SEPA before a grading permit application could be processed. King County selected Jones & Stokes as the EIS consultant in late September 1998.

King County issued a Draft Environmental Impact Statement (DEIS) on July 21, 1999. The DEIS was made available for public comment using an extended 60-day comment period, which ended September 21, 1999. During the comment period, King County received hundreds of letters and e-mails totaling more than 750 pages of comments from individuals, organizations, and agencies.

On September 14, 1999, King County held a public meeting in coordination with the Vashon Community Council at Chautauqua Elementary School on Vashon Island. During that meeting over 100 pages of testimony was received (see King County's web page at <http://www.metrokc.gov> for all comments received). More than 1,600 people attended, making it one of the most well attended hearings on a DEIS ever in King County.

Since the close of comments, King County and its consultant have spent considerable effort to respond to public comments. The comment/response process has been followed as required under SEPA (WAC 197-11-560).

1.1.2.2 Major Changes Between the Draft and Final EIS

The public and agency comments received on the DEIS brought up many additional issues that the EIS Team used to improve the FEIS. Major changes and types of changes made to the EIS fall into four main groups.

Modified Alternatives. The Proposed Action remains unchanged from the DEIS. However, King County developed and added numerous mitigation measures to address public and agency

concerns. Most notably, the FEIS describes and evaluates an option to replace the existing creosote-treated wooden dock with a new dock, and explains the rationale behind that option. In addition, the FEIS evaluates the option of moving the loading area into deeper water by extending the dock.

Develop and Evaluate Alternatives not Previously Given Detailed Consideration by the Agency.

Many new mitigation measures were developed to better address adverse environmental impacts. In particular, additional measures are presented that could protect marine habitat, salmon, madrone forest, and sensitive wildlife species. Key new measures include protection of a section of madrone forest to protect band-tailed pigeon and pileated woodpecker habitat (see Chapter 5). The decision-maker may apply some or all of these as conditions, or developed additional conditions, per SEPA substantive authority.

Supplement, Improve, or Modify the Analysis. The analysis has been greatly improved and modified for terrestrial and marine impacts (Chapters 5 and 6). The analysis has been supplemented in many other places in the EIS. In addition, information that was not available at the time the DEIS was published has been factored into the analysis, including:

- the Jones & Stokes eelgrass survey;
- the Washington Department of Ecology (Ecology) marine study;
- newsletters from the Ecology groundwater study;
- data from ongoing well monitoring; and
- three independent engineering studies evaluating the dock and necessary repairs.

Make Factual Corrections. Many comments pointed out errors on tables and in text. These have been corrected, as noted in Responses to Comments (Volumes 5 and 6 of the FEIS).

What happens next? A decision will not immediately follow the FEIS. Per King County Code, King County cannot issue a grading permit until all other government approvals have been made (see Section 1.2.3 for a list of pending approvals). Major approvals that will be required center on the dock, and include a Washington Department of Natural Resources (WDNR) lease agreement, a Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval (HPA), U.S. Army Corps of

Engineers (Corps) permitting under Section 10 of the Rivers and Harbors Act, and a Section 404 Permit under the Clean Water Act. In addition, King County must make a determination for an SSDP under the County's Shoreline Master Program.

After these approvals, King County DDES staff will submit staff recommendations to the DDES Director. The Director then, in consultation with staff and others, makes the decision to approve, approve with conditions, or deny the proposal. At the conclusion of these processes, the permit is either denied or issued.

1.1.3 Who is Preparing this EIS and Making the Decision

King County DDES is the lead agency under SEPA.

Jones & Stokes, an environmental consulting firm, is responsible for conducting and documenting the environmental analysis for this EIS. They are acting as a third-party reviewer, which means that they work for and under the direction of King County, rather than for the Applicant.

1.2 Overview of Applicant's Proposal

The King County Comprehensive Plan designates the property as a mining site and Glacier Northwest is currently permitted to extract sand and gravel from the site. However, for the past 20 years, the site has been mined at relatively low levels to supply local markets on Vashon and Maury Islands (between 10,000 and 20,000 tons per year). Prior to that time, offsite barge deliveries to sites such as Indian Island and various piers within the Port of Seattle waterfront had resulted in annual mineral extraction levels as high as approximately 1.3 million cubic yards (1.8 million tons).

1.2.1 Applicant's Objectives

The Applicant's objectives are:

- to provide prompt and economical delivery of minerals to many customers;
- to be able to respond quickly to large projects for a variety of clients—the “third-runway” project is by far the largest project in the near future, and the Applicant clearly desires to sell

product from the Maury Island site to the Port of Seattle for the proposed SeaTac airport third runway;

- to develop a long-term, productive, and profitable site to provide structural fills and other products related to sand and gravel; and
- to maximize mineral extraction, consistent with legal requirements for environmental protection.

The project is a private project, so the project objectives are those of the Applicant, and not King County. King County DDES has no other objectives than to:

1. comply with SEPA;
2. adhere to its legal responsibilities to ensure a fair and reasoned decision regarding the Applicant's proposal; and
3. implement the DDES mission "to serve, educate and protect our community through the implementation of King County's development and environmental regulations."

To meet these objectives, DDES has prepared this EIS and will consider the environmental impacts of the project, as well as reasonable alternatives that could feasibly attain or approximate the Applicant's objectives, but at a lower environmental cost or decreased level of environmental degradation. These considerations will be factored into the decision, according to King County's substantive authority under SEPA (WAC 197-11-660).

1.2.2 Applicant's Proposal

The Applicant proposes to convert the existing low-production site into a major, barge-based provider of minerals. To do this, they wish to be able to extract up to 7.5 million tons per year (5.5 million cubic yards), or about six times more than peak historic levels of the 1970s, the last time barging took place at the site.

Major elements of the proposal are:

- mining 193 acres over the life of the mine;
- up to 20 trucks per day for local deliveries (average would be lower);

- barging almost all mined materials to offloading facilities;
- using a belt conveyor system to move materials to barges;
- mining Monday through Friday from 6 a.m. to 10 p.m., and Saturday from 9 a.m. to 6 p.m.;
- loading barges at any time, 24 hours, 7 days per week (could be continuous for major projects);
- cleaning up arsenic and other metals within mining areas, and containing contaminated soils onsite in an enclosed berm;
- ramping up and slowing down production rates based on sales (periods of low activity expected); and
- mining between 11 and 50 years, depending on demand.

1.2.3 Other Permits Required for the Applicant's Proposal

The Applicant also wishes to revise and upgrade its existing Surface Mining Reclamation Permit, which was issued by the WDNR, in accordance with the 1993 amendments to the state's Surface Mining Act [Revised Code of Washington (RCW) Chapter 78.44]. The Act recognizes that, while surface mining is an essential activity, thorough reclamation of mined lands is necessary to prevent damage to the environment. Glacier Northwest has submitted a preliminary reclamation plan to WDNR, according to the requirements of the Surface Mining Act.

The U.S. Army Corps of Engineers has indicated that an individual permit would be required for repair of the dock, under Section 10 of the Rivers and Harbors Act.

U.S. Army Corps of Engineers consultation with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) would be required to comply with Section 7 of the Endangered Species Act (ESA).

King County has determined that this proposal requires an SSDP.

Per King County Code, Chapter 16.82.060, "no grading permit shall be issued until approved by federal, state, and local jurisdiction by laws or regulations." Therefore, the Applicant would be required to document compliance with all applicable

permits and regulations prior to initiating mining at the site. The most likely applicable permits and regulations include:

- Shorelines Substantial Development Permit;
- Surface Mining Reclamation Permit (WDNR);
- WDNR Aquatic Lands Lease;
- Endangered Species Act Section 7 Conservation;
- National Pollutant Discharge Elimination System (NPDES) Permit for stormwater during construction;
- Hydraulic Project Approval;
- Notice of Construction Permit from the Puget Sound Clean Air Agency (PSCAA);
- Model Toxic Control Act (MTCA) compliance;
- Water Rights Permit; and
- various building permits for fences and structures.

Please note that this list is presented for public information and disclosure. Some of these permits may not be required, while others not on this list may be.

1.2.4 Existing Permits

Mining on the site is currently conducted under a Grading Permit from King County, Permit No. 1128-714 (April 1997), and a Surface Mining Reclamation Permit from the WDNR, Permit No. 70-010256 (1971). Current operations are also covered by a Determination of Non-Significance issued by King County in 1977. These approvals, along with an Aquatic Lands Lease from WDNR, permit mining, processing, and reclamation activity on approximately 193 acres of the 235-acre site.

Decisions and conditions regarding the grading permit will override the existing permit.

1.2.5 How Mitigation is Addressed in this EIS

1.2.5.1 Legal Framework

SEPA can directly affect on-the-ground actions through conditions applied as part of the decision. Any governmental action on public or private proposals that are not exempt from SEPA may be conditioned or denied to mitigate adverse environmental impacts. SEPA requires that:

1. mitigation measures be based on policies, plans, rules, or regulations formally designated by the agency related to specific, adverse environmental impacts clearly identified in an environmental document, and
2. mitigation be reasonable and capable of being accomplished.

This EIS documents this SEPA requirement by listing the specific impact, followed by the alternative/mitigation measure to reduce the impact, followed by the Regulatory/Policy basis for the condition.

Note that the EIS need not evaluate or define mitigation measures in detail, but only so far that their effectiveness and reasonableness can be determined. A “reasonable” alternative (or mitigation measure) means an action that could feasibly attain or approximate a proposal’s objectives but at a lower environmental cost or decreased level of environmental degradation. (WAC 197-11-786).

In addition, mitigation measures must be in proportion to the impact caused by the project, as defined in the FEIS. Mitigation cannot be required for impacts not attributed to the project, although the Applicant can voluntarily commit to additional mitigation.

If the proposal would be likely to result in significant adverse environmental impacts identified in a final or supplemental environmental impact statement, and reasonable mitigation measures are insufficient to mitigate the identified impact, then a proposal may be denied under SEPA.

Mitigation includes measures to reduce or avoid a particular environmental impact.

1.2.5.2 Types of Mitigation

Mitigation can occur in several ways, including:

- *Avoiding the impact* by not taking a certain action;
- *Minimizing the impact* by limiting the project, using technology, or taking affirmative steps to avoid or reduce impacts;
- *Rectifying the impact* by repairing, rehabilitating, or restoring the affected environment;
- *Reducing or eliminating the impact over time* by preservation and maintenance operations during the life of the action;
- *Compensating for the impact* by replacing, enhancing, or providing substitute resources or environments; and/or
- *Monitoring the impact and taking appropriate corrective measures.*

Alternatives 1 and 2 as Mitigation. In this EIS, four forms of mitigation are evaluated. First, the two action alternatives evaluated in the EIS examine lower levels of bargaining to determine how such reductions might mitigate adverse effects of the proposal. These alternatives were developed in response to public comment and internal evaluation of the proposal, as King County was determining the scope of the EIS.

Applicant-Proposed and Legally Required

Environmental Measures. The second and third types of mitigation evaluated in this EIS are already assumed to be applied to the project and were factored in to the environmental analysis of each alternative. These two types of measures include (1) those which the Applicant has already proposed in response to known environmental issues regarding mining at the project site, and (2) those which are standard requirements of existing regulations, such as requirements stipulated by the King County Code. Collectively, these two types of mitigation measures are described in each chapter of this EIS as “Measures Already Proposed by the Applicant or Required by Regulation.”

Potential Additional Measures and Alternatives. The fourth and final type of mitigation includes potential measures

which may be applied to the Grading Permit by King County through the County's discretionary authority under SEPA. These measures were not factored in to the impact analysis but were developed following the analysis to identify possible ways to reduce impacts or public concerns. These measures are neither required nor proposed by the Applicant, but are presented for the consideration of the public, the regulatory agencies, and King County. King County may require some or all of these measures, or may require additional measures based on their review and on public and agency comments. These potential measures are described in each chapter of this FEIS as "Additional Measures."

1.3 Existing Site Characteristics

The roughly 235-acre site proposed for continued mining activities is located in portions of Sections 28 and 29, Township 22N, Range 3E, on the eastern edge of Maury Island next to Vashon Island and along the East Passage in Puget Sound ([Figures 1-1 through 1-5](#)).

The following sections describe the property being proposed for mining. Additional details about site conditions are provided in the first sections of Chapters 3 through 12.

1.3.1 Geology/Mineral Resources

The site contains mostly sand and some gravel in a deposit referred to as Vashon Advance Outwash. These deposits make ideal structural fill for construction projects. It is estimated that the site contains a Vashon Advance Outwash deposit of approximately 85 million tons. This is equivalent to 63 million cubic yards.

1.3.2 Topography

The site generally slopes from northwest to southeast toward Puget Sound ([Figure 1-5](#)). The upland northern, western, and southwestern portions of the site are generally rolling with slope gradients ranging from approximately 5 to 20 percent. From these upland portions of the site, topography drops sharply to form bluffs with slope gradients ranging from approximately 60 to 100 percent. Two excavations (mining pits) from historic mining activities are present along the bluffs. These areas total 40 acres of disturbed area, of which 9 acres are currently being mined. Slopes

along excavated areas range from about 60 percent to near vertical. Total elevation change across the site is about 360 feet.

1.3.3 Vegetation

Mature madrone forest covers most of the site. The site contains several upland plant communities, including mixed madrone/Douglas-fir forests, madrone woodlands, mixed alder and willow thickets, mixed grasses, and shrubs. The site also contains approximately 9 acres of bare ground related to the current mining operation and 33 acres of previously mined areas. Portions of the previously mined areas now have vegetation growing on them, much of which is Scot's broom and other non-native or weedy species. No wetland vegetation is located on the site. Patches of eelgrass are present landward of the barge loading dock.

1.3.4 Land Use Designations and Zoning

The site is designated "Mining" on the 1994 King County Comprehensive Plan Land Use Map, and is also identified as a "Designated Mineral Resources Site" on the 1994 King County Comprehensive Plan Mineral Resources Map. The site is currently zoned Mineral Resources (M) (potential RA-2.5) by the King County Zoning Code (Title 21A).

1.3.5 Site Access and Utilities

Access to the site is provided from two private driveways from Southwest 260th Street ([Figure 1-5](#)). Both driveways connect to the shoreline, but the driveway on the northeastern side of the site is in the best condition.

Electricity is available to power the portable equipment that has been used occasionally on the site. No other utilities, including water or sewer, serve the site.

1.4 Past and Current Mining Activity

Approximately 42 acres of the site has been disturbed by previous mining activities, approximately 9 acres of which has been worked in the past 5 years. The intensity of mining at the site has varied according to market conditions.

Sand and gravel have been mined from the site since the 1940s. Glacier Northwest, or its predecessors, has been mining the site since the late 1960s, with some relatively intense periods of mining in the early 1970s to provide fill for major construction projects, such as Terminal 37 and Piers 25, 86, and 115 of the Port of Seattle.

In 1971, the site (then owned by Pioneer Sand & Gravel) was the largest of four gravel pits on the southeastern coast of Maury Island. Over 4 million cubic yards of fill were extracted from the site for the construction of shipping piers and terminals along the Seattle waterfront and at Indian Island. Annual extraction levels were as high as 1.3 million cubic yards. During these past operations, bulldozers were used to push the sand and gravel downslope, into a series of tunnels and conveyor belts, and then onto barges (similar to the operations now being proposed) (Port of Seattle 1971).

Barging has not taken place at the site for over 20 years.

1.5 Citations

Port of Seattle. 1971. Sand and gravel play major role in construction. Port of Seattle Reporter. July.